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ABSTRACT
        According to the theory of multiple intelligences (MI),
intelligence is a set of abilities, talents, and skills in eight areas:
mathematical-logical, spatial-visual, bodily-kinesthetic, musical-rhythmic,
verbal-linguistic, interpersonal, intrapersonal, and naturalistic. All humans
possess these intelligences in varying degrees, and most people can develop
all of them to a degree of competence. Because the MI theory was formed in
part by examining people's performance of jobs and tasks, MI profiling and
learning activities should be useful in career choice and career development.
The use of MI theory can assist the career development and counseling process
in three ways: self-knowledge (awareness of MI strengths and weaknesses adds
to the self-knowledge required for successful career choice); expansion of
career possibilities (adults involved in MI activities broadened the
parameters of their career choices); and enhancement of self-esteem (at-risk
students and adults who may not have experienced career success have
benefited from recognizing their intelligence and identifying jobs matching
their strengths). Issues in the use of MI include the following: not
"labeling" people by their preferred intelligences, not matching
intelligences to careers too early, and encouraging individuals to develop
less-preferred intelligences. (An annotated bibliography that contains 21
references constitutes approximately 75% of this document.) (MN)

Multiple Intelligences and Career Development
Trends and Issues Alert No. 8

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Multiple Intelligences and Career Development

Howard Gardner's (1999) theory of multiple intelligences (MI) views intelligence as a set of abilities, talents, and skills in eight areas: mathematical-logical, spatial-visual, bodily-kinesthetic, musical-rhythmic, verbal-linguistic, interpersonal, intrapersonal, and naturalistic. All humans possess these intelligences in varying degrees and apply them depending on their preferences, activities, and environment (Mantzaris 1999); most people can develop all of them to a degree of competence. Because the theory was formed in part by examining what people do in the world—in the performance of jobs and tasks (Checkley 1997), MI profiling and learning activities should be useful in career choice and career development. A profile of an individual's strengths and weaknesses in the intelligences can be developed using a tool such as the Multiple Intelligences Developmental Assessment Scales (MIDAS) created by Shearer (1997, 1999). The use of MI theory can assist the career development and counseling process in a number of ways:

Self-knowledge. Awareness of one's MI strengths and weaknesses adds to the self-knowledge that is a prerequisite for successful career choice. Shearer (1997) found that students who completed the MIDAS profile had a clearer sense of their skills and abilities. As with Holland's personality and interest categories, potential career options for each intelligence can be identified (Shirley 1996).

Expansion of career possibilities. Mantzaris (1999) found that adults involved in MI activities broadened the parameters of their career choices. Rather than focusing on the "right fit," learners found that the self-discovery inspired by MI added multiple dimensions to the process of career choice.

Enhancement of self-esteem. Schools historically have valued verbal and mathematical intelligences over all others. Vocational subjects and related occupations have sometimes been denigrated because the spatial, kinesthetic, and other intelligences needed in these areas have not been recognized (Smagorinsky 1996). At-risk students and adults who may not have experienced career success have benefitted from recognizing that they are intelligent and that they can identify jobs that match their strengths (Shearer 1999; Taylor-King 1997).

Issues in the use of MI include not "labeling" people by their preferred intelligences, not matching intelligences to careers too early, and encouraging individuals to develop less-preferred intelligences (Armstrong 1994; Shearer 1999). The following resources provide additional information on using multiple intelligences in career development.

Resources

Antoniotti, W. "Education in a World of Multiple Intelligence." 1999. <http://carrcom.clever.net/philos1.htm>

Discusses the relationship between intelligences and career success and advocates appropriate education and the development of special intelligence skills throughout working life.

Armstrong, T. *Multiple Intelligences in the Classroom*. Alexandria, VA: Association for Supervision and Curriculum Development, 1994. (ED 374 104)

Provides concrete examples of how MI can be applied to curriculum development, teaching strategies, classroom management, assessment, special education, and career counseling.

Bartolini, V. "On-the-Job Training: Children's Play and Work." In *Playing for Keeps: Supporting Children's Play. Topics in Early Childhood Education, v. 2*, edited by A. L. Phillips, pp. 119-126. St. Paul, MN: Redleaf Press, 1996. (ED 405 107)

Play enables children to develop lifelong interpersonal intelligence that will enhance success in the future workplace. Through play, children develop social competence, pose and solve interesting problems, and thus develop the types of skills needed as future effective employees.

Cantrell, M. L.; Ebdon, S. A.; Firlik, R.; Johnson, D.; and Rearick, D. "The Summer Stars Program." *Educational Leadership* 55, no. 1 (September 1997): 38-41. (EJ 550 531)

Designing projects around multiple intelligences, a Connecticut school created a 1-week summer camp where children can tap into their unique strengths. The Summer Stars program allows children aged 7-12 to choose materials and activities from many topics and to participate in one of three internships involving a discovery museum, a maritime center, and an aircraft corporation.

Checkley, K. "The First Seven...and the Eighth: A Conversation with Howard Gardner." *Educational Leadership* 55, no. 1 (September 1997): 8-13. (EJ 550 524)

Reviews seven multiple-intelligence types and adds naturalist intelligence, the ability to discriminate among living things. Challenges the IQ concept and common testing practices and urges educators to distinguish multiple intelligences from learning styles.

DeFalco, A. "The Learning Process, Apprenticeships, and Howard Gardner." *Journal of Cooperative Education* 30 no. 2 (Winter 1995): 56-67. (EJ 502 490)

Basing cooperative education in a behaviorist view of learning fails to link curriculum, work experience, and learners. A better approach is Gardner's concept of cognitive apprenticeship: structured experiential learning that recognizes multiple intelligences and is based on the psychology of learning.

Gardner, H. *Intelligence Reframed: Multiple Intelligences for the 21st Century*. New York: Basic Books, 1999.

Offers practical guidance on the educational uses of the theory and responds to critiques. Introduces two new intelligences (existential intelligence and naturalist intelligence) and argues that the concept of intelligence should be broadened, but not so absurdly that it includes every human virtue and value. Speculates about the relationship between multiple intelligences and the world of work in the future.

Glasgow, J. N., and Bush, M. S. "Promoting Active Learning and Collaborative Writing through a Marketing Project." *English Journal* 84 no. 8 (December 1995): 32-37. (EJ 517 595)

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An 11th-grade English teacher promoted active learning in her class through a hands-on project that required group problem solving, decision making, and technical writing skills. Students simulated a toy factory by working collaboratively in teams to design, build, and market a LEGO toy using multiple intelligences.

Glasgow, J. N., and Bush, M. "Students Use Their Multiple Intelligences to Develop Promotional Magazines for Local Businesses." *Journal of Adolescent & Adult Literacy* 39 no. 8 (May 1996): 638-649. (EJ 527 422)

High school students developed promotional magazines for local businesses, thus experiencing business operations and developing MI skills while researching a product. Students took responsibility for their learning and made connections between school and workplace knowledge.

Jans, S. "Improving Adolescents' Motivation through the Use of Creative Teaching in the Industrial Arts." Master of Arts Action Research Project, St. Xavier University and IRI/Skylight, 1997. (ED 410 423)

Multiple intelligences strategies were one of three interventions tried. Learning activities were taken from industrial arts topics, including measurement, technical drawing, woodworking, research and design, and small engines. Although teacher observations indicated that students exhibited more time on task with greater involvement in learning tasks, motivation changes could not be documented.

Mantzaris, J. "Adding a Dimension to Career Counseling." *Focus on Basics* 3, no. 1 (March 1999). <http://gseweb.harvard.edu/~ncsall/mantzari.htm>

An adult basic education teacher describes how multiple intelligences profiles and activities helped adult learners expand their range of career choices.

Morris, C. "Career Success, Multiple Intelligences and the MIDAS." *MI News* 1, no. 5 (May 1999). <http://www.angelfire.com/oh/themidasnews/may4art.html>

Reviews MI theory and describes research validating the use of the Multiple Intelligences Developmental Assessment Scales (MIDAS) as a career development tool.

National Business Education Association. "Multiple Intelligences: A Wealth of Human Potential." *Keying In* 8, no. 2, November 1997. Reston, VA: NBEA, 1997. (ED 413 446)

Includes "How Do Students Learn Best and How Can Teachers Best Help Them?"; "Multiple Intelligences in Action in the Business Classroom"; "Book-Smart, Street-Smart or Both? A Personal Checklist"; "Assessment Strategies"; and "Hints from the Experts."

O'Neill, L. *Matching Multiple Intelligences to Careers.* Tucson, AZ: Zephyr Press, 1999.

Teacher's manual that can be used to identify an individual's dominant intelligence based on MI theory using the O'Neill Talent Inventory. Connects the intelligences to careers, leisure activities, and avocations.

Project Link: Bee Anything. Choose-a-Career. Plymouth, MN: Intermediate District 287, 1999. <http://nt2.int287.k12.mn.us/link/bee/ccintro.html>

A component of the Project Link K-12 career education curriculum, Choose-a-Career allows children to do career inquiry learning on the Web based on areas of personal interest. It is organized around the eight MIs.

Shearer, C. B. "Reliability, Validity and Utility of a Multiple Intelligences Assessment for Career Planning." Paper presented at the Annual Meeting of the American Psychological Association, Chicago, IL, August 15-19, 1997. (ED 415 476)

In a study of 98 college students who were enrolled in career exploration classes, a strong majority reported that the MIDAS Profile was beneficial and almost three-fourths of the students reported that they learned new information about their skills and abilities from the profile.

Shearer, B. "Assessing the Multiple Intelligences: What Good Can Come of It?" *The MIDAS* 1999. <http://www.angelfire.com/oh/themidas/article1.html>

Eight 4th-12th grade teachers describe their use of MI activities and the MIDAS profile to help students develop self-awareness for career decision making and to motivate at-risk students by showing them a relationship between their intelligences and future work.

Shirley, L. J. *Pocket Guide to Multiple Intelligences.* Clemson, SC: National Dropout Prevention Center, 1996. (ED 405 376)

Discusses characteristic strengths of each type of MI and the application of the type of intelligence. Provides sample assessment tools and lists of potential career options for each intelligence.

Smagorinsky, P. "Multiple Intelligences, Multiple Means of Composing: An Alternative Way of Thinking about Learning." *NASSP Bulletin* 80 no. 583 (November 1996): 11-17. (EJ 535 649)

Home economics is often denigrated for requiring little intellect. There is a strong cultural bias that undervalues sewing and relegates it to "handedness" instead of the loftier "headedness." According to Howard Gardner's theory of multiple intelligences, the two do not stand in opposition. Handiwork is a spatial intellectual process.

Taylor-King, S. "Using Multiple Intelligences and Multi-Sensory Reinforcement Approaches to Enhance Literacy Skills among Homeless Adults." Paper presented at the International Congress on Challenges to Education, Lahei, HI, July 19, 1997. (ED 417 332)

The use of multiple intelligences can individualize education for homeless adults. Adult learners should be encouraged to share their backgrounds, both as a source of improving their self-esteem and as a starting point for enhancing their educational work.

Visser, D. R. "That's Using Your Brain." *Training and Development* 50 no. 9 (September 1996): 38-40. (EJ 530 291)

Discusses new adult learning theories, including those of Roger Sperry (left brain/right brain), Paul McLean (triune brain), and Howard Gardner (multiple intelligences). Relates adult learning theory to job training.

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